



SCIENCE

NF4 AO Science Evaluation

Dr. Curt Niebur

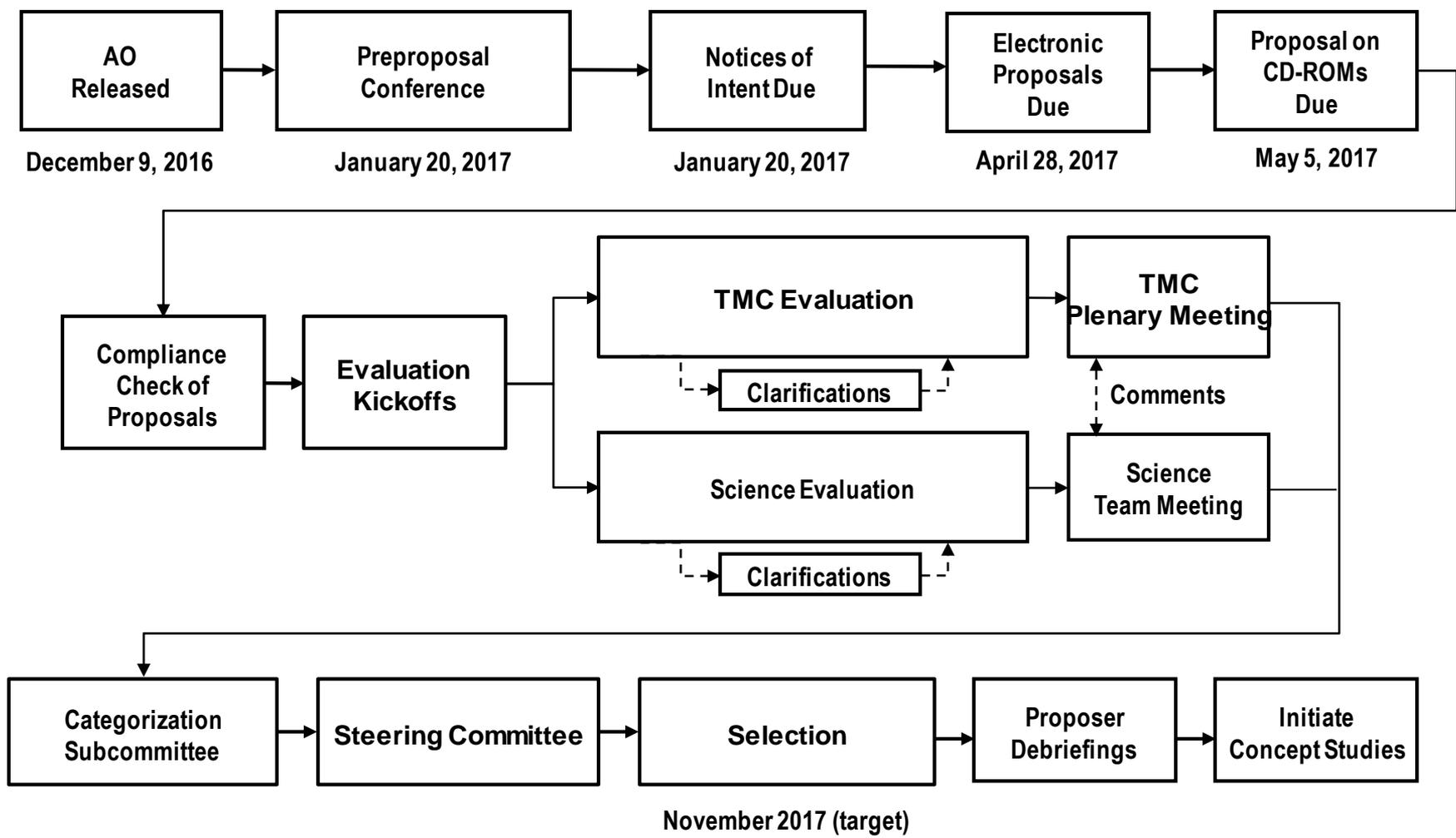
Lead Program Scientist for New Frontiers

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Proposal Evaluation Flow





Evaluation Overview



- Proposals submitted to NASA will undergo the NASA evaluation and two-step selection process described in the NF4 AO.
- All persons with access to proposals will be required to sign a Non-Disclosure Agreement or equivalent.
- Proposals will be assessed against criteria given in Section 7.2 of the AO by panels of individuals who are peers of the proposers in the relevant scientific areas.
 - Panel members will be instructed to evaluate every proposal independently without comparison to other proposals.



Philosophical Underpinnings of Forms A through C



- Forms A, B, and C are concerned with different aspects of the proposed investigation.
 - Form A deals with the quality of the science investigation and science questions (*Is it gnome-worthy science?*)
 - Form B deals with the implementation (or methodology) of the science investigation (*Garden gnome on a rope*)
 - Form C deals with the technical feasibility of the implementation (*Can a garden gnome be recruited and then tied to a suitably long and strong rope?*)
- Forms A, B, and C are independent of one another and reviewers and proposers should avoid convolving them.
 - When assessing the science merit (Form A) assume that a workable approach to conduct the necessary investigation is proposed (Form B) and that the team can build the instrument to specifications (Form C).



Remember it is possible to do an excellent job accomplishing atrocious science, and vice versa, and everything in between



Science Evaluation

- The Science Evaluation panel will evaluate the Intrinsic Science Merit and Science Implementation and Feasibility Merit of the proposed investigation.
 - Intrinsic Merit evaluation factors (A-1 through A-4) are given in Section 7.2.2 of the AO.
 - Implementation and Feasibility Merit evaluation factors (B-1 through B-6) are given in Section 7.2.3 of the AO.
- This evaluation will result in narrative text, including specific major and minor strengths and weaknesses, as well as appropriate adjectival ratings for the Intrinsic Merit and Implementation Merit.



Clarifying Form A and B Overlap



- Factors A-3 and B-1 overlap in ways that can be confusing. Until this is addressed at the SMD level, I suggest:
 - Considering A-3 as an assessment of the integrity of the STM and B-1 as an assessment of the science practicality of the mission.
 - Data adequacy (A-3) is about idealized data quality and quantity while data sufficiency (B-1) is about the quality and quantity of data realistically achievable with the proposed mission implementation.
- This aligns with the philosophy of the Garden Gnome on a Rope: Form A is about idealized science, Form B is about practical pursuit of that idealized science.



Categorization and Steering



- An ad hoc subcommittee will convene to consider the peer review results and, based on the evaluations, categorize the proposals.
 - Categorization definitions are given in Section 7.1.2 of the AO.
- The NASA AO Steering Committee will review the results of the proposal evaluations and categorizations, will conduct an independent assessment of the evaluation and categorization processes, and will approve the selection recommendation.



Selection



- The final evaluation results will be presented to the SMD AA, who will make the final selections.
- The overriding consideration for selection will be to maximize scientific return and minimize implementation risk while advancing NASA's science goals and objectives within the available budget for this program.
- In addition, the SMD AA may take into account a wide range of programmatic factors in deciding whether or not to select any proposals and in selecting among top-rated proposals.

Questions?



**Image of Jupiter acquired by the
JunoCam instrument on Juno**